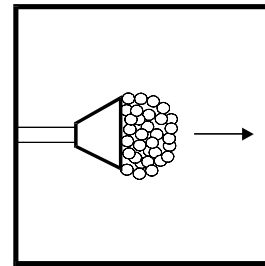
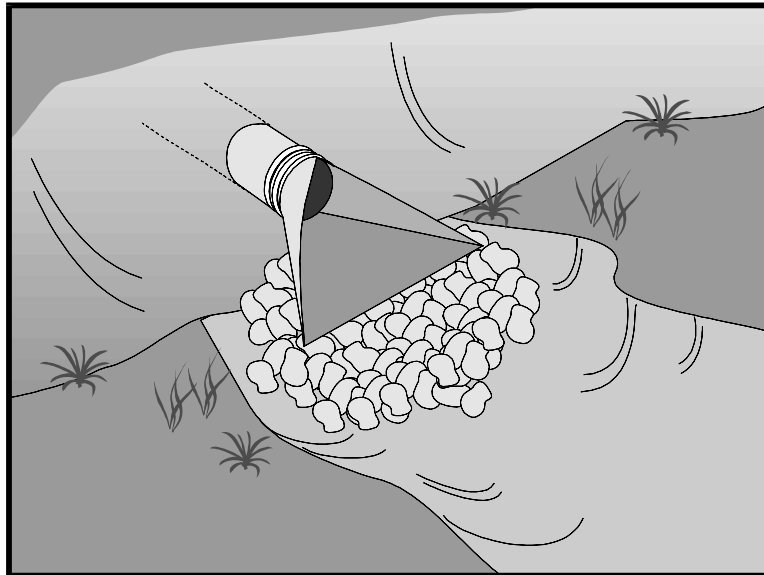


Flared Culvert End Sections



BMP Objectives

- Soil Stabilization
- Sediment Control
- Tracking Control
- Wind Erosion Control
- Non-Storm Water

Definition and Purpose Flared culvert end sections are devices placed at the inlets and outlets of pipes and channels to improve hydraulic operation, retain the embankment near pipe conveyances, and to help prevent scour and minimize erosion at inlets and outlets.

Appropriate Applications

- Outlets of overside drains and culverts.
- Inlets of culverts.
- Often used with outlet protection and energy dissipation devices.

Limitations Primarily for hydraulic efficiency, with some limited erosion control benefits.

Design Guidance

- Common and preferred device for end treatment for small to medium sized culverts.
- Consider the need for outlet protection and energy dissipation devices.
- Rock slope protections or flared end sections can be constructed at inlets to protect from scouring.
- Use Caltrans Standard Plans D94A and D94B

References

- Section 70-1.02C, Flared End Sections, p. 510, State of California Department of Transportation Standard Specifications (July 1999)
- 1999 Standard Plan D94A and D94B, pp. 118 and 127, State of California-Department of Transportation Standard Plans (July 1999).